Building 90

Safety Meeting

14 March 2006

Agenda

- **Meeting minutes, dated 02/17/06**
- **Review of open actions**
- **Topics of the Month: Thunderstorms, Tornadoes, Lightning**
- **Miscellaneous info**
- **Questions**

Meeting Minutes

- **Sent via email, 02/21/06**

- **Actions: None**

Moving Day Safety

- **Get rid of junk BEFORE… don't move it**

- **Avoid over-packing box**
  - **Pack at proper height**
  - **Avoid reaching/twisting**
  - **Keep within adequate lifting weight**

Moving Day Safety

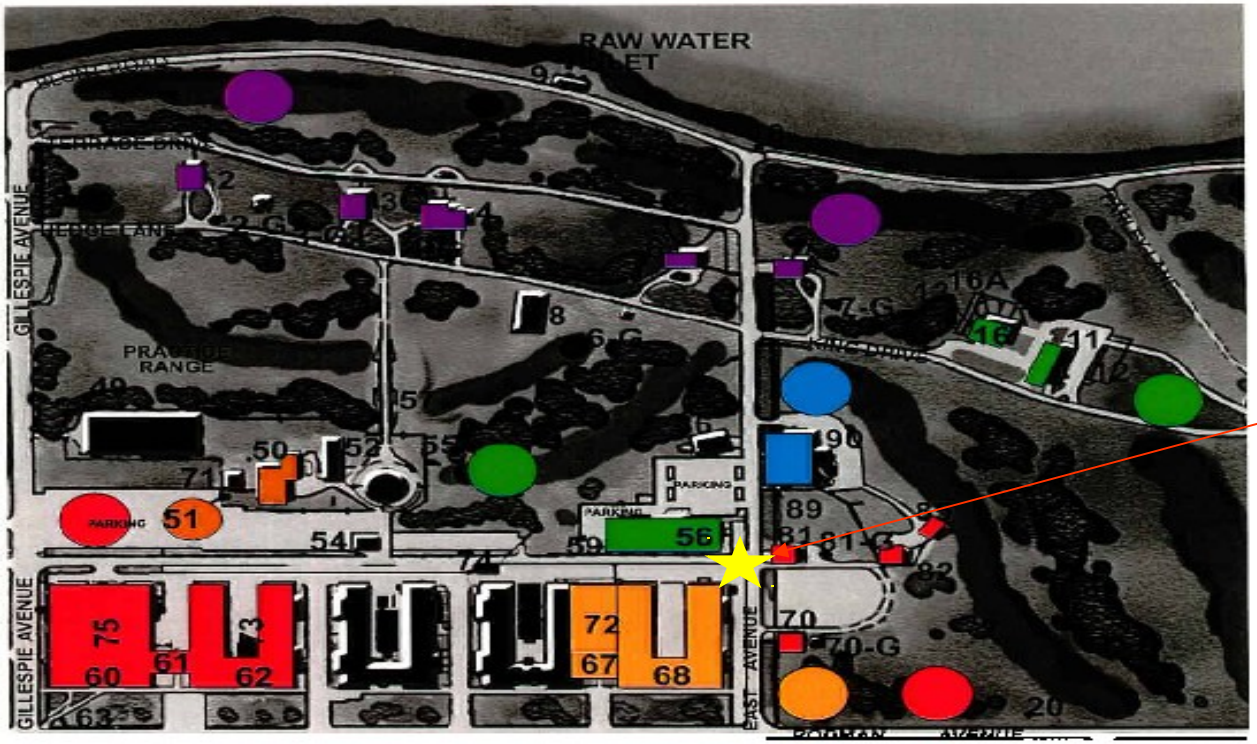
- **Remember Safe Lifting procedures**
  - **Assure clear path**
  - **Lift with legs**
  - **Do not twist**
  - **Carry load c**
  - **Use buddy**

Evacuation Reminder

- **Evacuation Point for Building 90**

At or near STOP sig
at North Avenue
and East Street

ROCK ISLAND ARSENAL
EVACUATION ASSEMBLY POINTS



QUADRANT 4

Quarters 2, 3, 4, 6	Report to #1 Green north of quarters
Quarters 7	Report to #2 Green north of quarters
Bldgs 11, 16	Report to grass area east of bldg 11
Bldgs 60, 61, 62, 75	Report to parking lot OF north of bldg 60
Bldgs 50, 52	Report to parking lot OF south of building 50
Bldg 56	Report to #16 Green northwest of bldg 56
Bldgs 67, 68, 72	Report to POW/MIA Memorial East of bldg 68
Quarters 70, 81, 82, 85	Report to POW/MIA Memorial South of quarters
Bldg 90	Report to #15 Green north of bldg 90

Topic of the Day

Thunderstorms…
Tornadoes…
Lightning…

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Tornadoes…
Lightning…

Thunderstorms

- **Produce**
  - **Tornadoes**
  - **Lightning**
  - **Strong Winds**
  - **Flash Flooding**
  - **Hail**

Thunderstorms

- **ALL thunderstorms are dangerous**
- **Typical t-storm**
  - **15 miles in diameter**
  - **Lasts an average of 30 minutes**
- **Of 100,000 t-storms, approximately 10% are severe**
- **“Severe”**
  - **Hail at least ¾” in diameter**
  - **Winds of 58 mph or stronger**
  - **Tornado**

Tornadoes

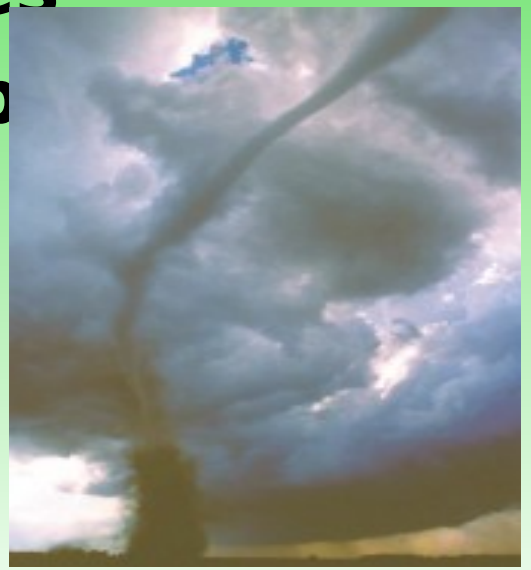
- **Violently rotating column of air extending from thunderstorm to ground**
- **Typically move from SW to NE, but may move in any direction**
- **Average forward speed is 30 mph, but may move to 70 mph**
- **Strongest have rotating winds of more than 250 mph**

Tornadoes

- **Waterspouts are tornadoes that form over warm water.**
- **May occur at any time of year**
- **Have occurred in every state; most frequently east of Rocky Mountains during spring/summer months**
- **Most likely between 3 and 9 pm, but can happen at any time**

Shapes and Sizes

- **Weak Tornadoes**
  - **88% of all tornadoes**
  - **Less than 5% of tornado deaths**
  - **Lifetime 1 – 10+ minutes**
  - **Winds less than 110 mp**

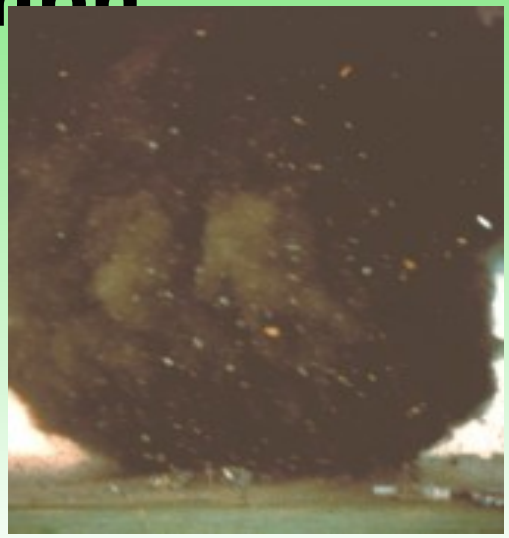


Shapes and Sizes

- **Strong Tornadoes**
  - **11% of all tornadoes**
  - **Nearly 30% of all tornado deaths**
  - **May last 20 minutes or longer**
  - **Winds 110 – 205 mph**

Shapes and Sizes

- **Violent Tornadoes**
  - **Less than 1% of all tornadoes**
  - **70% of all tornado deaths**
  - **Lifetime can exceed 1 hour**
  - **Winds greater than 205 mph**



Lightning

- **Results from the buildup and discharge of electrical energy between positively and negatively charged areas.**
- **Rising and descending air within a thunderstorm separates these positive and negative charges.**
- **Water and ice particles also affect charge distribution.**

Lightning

- **A cloud-to-ground lightning strike begins as an invisible channel of electrically charged air moving from the cloud toward the ground.**
- **When one channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the clouds and produces the visible lightning strike.**

Lightning

- **Causes average of 80 fatalities and 300 injuries each year.**
- **Occurs in all thunderstorms**
- **Each year lightning strikes the Earth 20 million times.**
- **Energy from one lightning flash could light a 100-watt light bulb for more than 3 months.**

Lightning

- **Most lightning fatalities and injuries occur when people are caught outdoors in the summer months during the afternoon and evening.**
- **Can occur from cloud-to-cloud, within a cloud, cloud-to-ground, or cloud-to-air.**
- **Many fires in the western United States and Alaska are started by lightning.**

Lightning

- **The air near a lightning strike is heated to 50,000°F – *hotter than the surface of the sun!***

- **The rapid heating and cooling of the air near the lightning channel causes a shock wave that results in *thunder*.**

Lightning Kills…

- Boating
- Standing under a tree
- Riding a horse
- Swimming
- Riding on a lawnmower
- Playing soccer
- Golfing
- Talking on the telephone
- Fishing in a boat
- Bike riding
- Loading a truck
- Mountain climbing

Thunder and Lightning

- **How far away?**
  - **Count the number of seconds between a flash of lightning and the next clap of thunder.**
  - **Divide this number by 5 to determine the distance to the lightning in miles.**
- **30/30 Lightning Safety Rule**
  - **Go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder.**
  - **Stay indoors for 30 minutes after hearing the last clap of thunder.**

Thunder and Lightning

- **Remember – if you can hear thunder – you are close enough to be struck by lightning!**

Straight-Line Winds

- **Responsible for most thunderstorm wind damage.**
- **Winds can exceed 100 mph!**
- **One type of straight-line wind, the downburst, is a small area of rapidly descending air beneath a thunderstorm.**

Straight-Line Winds

- **Downburst can cause damage equivalent to a strong tornado and can be extremely dangerous to aviation.**
- **A “dry microburst” is a downburst that occurs with little or no rain. These destructive winds are most common in the western United States.**

Flash Floods

- **Flash floods and floods are the #1 cause of deaths associated with thunderstorms**
- **More than 140 fatalities each year**
- **Most flash flood fatalities occur at night**
- **Most victims are people who become trapped in vehicles**
- **Six inches of fast-moving water can knock you off your feet**
- **A depth of two feet will cau most vehicles to float**

Hail

- **Strong rising currents of air within a storm, called updrafts, carry water droplets to a height where freezing occurs.**

- **Ice particles grow in size, becoming too heavy to be supported by the updraft, and fall to the ground.**

Hail

- Causes more than $1 billion in damage to property and crops each year.
- Large ston[illegible] speeds [illegible]

Be Prepared

- **Develop a plan - home, work, school, when outdoors.**
- **Identify a safe place to take shelter.**
- **Have frequent drills.**
- **Know the county/parish in which you live or visit.**

Be Prepared

- **Keep a highway map nearby to follow storm movement from weather bulletins.**

- **Have a NOAA Weather Radio with a warning alarm tone and battery back-up to receive warnings.**

Be Prepared

- **National Weather Service watches / warnings available on the Internet.**
- **Listen to radio and television for weather information.**
- **Check the weather forecast before leaving for extended periods outdoors.**

Be Prepared

- **Watch for signs of approaching storms.**

- **If severe weather threatens, check on people who are elderly, very young, or physically or mentally disabled.**

Tornado Safety Rules

- **In a home or building, move to a pre-designated shelter, such as a basement.**
- **If underground shelter is not available, move to a small interior room or hallway on the lowest floor and get under a sturdy piece of furniture. Put as many walls as possible between you and the outside.**
- **Stay away from windows.**

Tornado Safety Rules

- **Get out of automobiles.**
- **Do not try to outrun a tornado in your car; instead, leave it immediately for safe shelter.**
- **If caught outside or in a vehicle, lie flat in a nearby ditch or depression and cover your head with your hands.**

Tornado Safety Rules

- **Be aware of flying debris.**
- **Mobile homes, even if tied down, offer little protection from tornadoes.**
  - **Leave a mobile home and go to the lowest floor of a sturdy nearby building or a storm shelter.**

Lightning Safety Rules

- **Postpone outdoor activities if thunderstorms are imminent.**
- **Move to a sturdy building or car.**
- **Do not take shelter in small sheds, under isolated trees, or in convertible automobiles.**

Lightning Safety Rules

- **Stay away from tall objects such as towers, fences, telephone poles, and power lines.**

- **If lightning is occurring and a sturdy shelter is not available, get inside a hard top automobile and keep the windows up. Avoid touching any metal.**

Lightning Safety Rules

- **Utility lines and metal pipes can conduct electricity. Unplug appliances not necessary for obtaining weather information.**

- **Avoid using the telephone or any electrical appliances. Use phones ONLY in an emergency.**

Flood Safety Rules

- **Avoid walking, swimming, or driving in flood waters.**
- **Stay away from high water, storm drains, ditches, ravines, or culverts.**
- **If it is moving swiftly, even water six inches deep can knock you off your feet.**

Flood Safety Rules

- **If you come upon flood waters, stop, turn around, and go another way. Climb to higher ground.**
- **Do not let children play near storm drains.**

Watch vs. Warning

- **Thunderstorm Watch: Favorable conditions exist for a severe thunderstorm (Large hail, heavy rains, intense lightning, and/or damaging winds).**

- **Thunderstorm Warning: Issued when a storm is producing the conditions listed above; severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property to those in the path of the storm.**

Watch or Warning

- **Tornado Watch: Favorable conditions for a tornado exist. Tornadoes are possible in your area. Remain alert for approaching storms.**

- **Tornado Warning: A tornado has been sighted or indicated by weather radar.**

Be Prepared

- **Once you receive a warning or observe threatening skies, YOU must make the decision to seek shelter before the storm arrives.**

Household Chemical Alternatives

Household Chemical Alternatives

- White Vinegar
- Baking Soda
- Rubbing Alcohol
- Ammonia
- Furniture Polish

Miscellaneous

- Spring, 20 March
- Poison Prevention Week, 19 – 25 March
- Boating Safety Course
  - Corps of Engineers
  - 8-hour Illinois DNR Boat Safety Certification
  - 29 April, 6 May, 20 May, 3 June
  - 0800 – 1630
  - Pre-register @ 794-5338

One Last Reminder…
As we prepare to LEAVE Building 62…

PLEASE
DON'T THROW
YOUR CIGARETTE ENDS
ON THE FLOOR
THE COCKROACHES
ARE GETTING CANCER

Next Meeting

- **13 April 2006**
- **1300**
- **GM Conference Room!**

Questions?